1203013
For samples received by the laboratory on 1/28/2012, the analyses Alcohol and Glycol for FB03 (1201013-12) were not recorded on the chain-of-custody form. A request for a Letter-to-File was submitted to the sampler on 2/9/2012.

Some samples designated for the analysis of Orthophosphorous were received at the laboratory past the established holding times. Therefore, all samples were analyzed using the Total Phosphate method and results for the analysis by the Orthophosphorous method are not included in this report Since the Orthophosphorous method was being used as a screening method to determine the need to analyze the sample by the Total Phosphate method, results for Total Phosphate are not impacted.

Samples designated for the analysis of Oil & Grease were received in sample containers inconsistent with the type needed for the routine extraction procedure. Therefore, all samples were extracted using the manual extraction technique.

Glycols by HPLC/MS/MS Note:
An HPLC/MS/MS method does not currently exist for these analytes. ASTM D 7731-11 and EPA SW-846 Methods 8000C and 8321 were followed for method development and QA/QC limits, where applicable. All applicable OASQA On Demand QA/QC protocols were followed.

SVOAs Analysis Note:
A separate calibration curve is used for two compounds, 2-methoxyethanol and 1-methylnaphthalene, with quality control requirements per the on-demand protocol.

Quantitation limit for 2,4-Dinitrophenol is qualified estimated "UJ" in sample 1201013-01 due to zero percent recovery in the low-spike quality control check. Quantitation limits for 2,4-Dinitrophenol, pentachlorophenol, and 4,6-dinitro-2-methylphenol are qualified estimated "UJ" in samples 1201013-03, -05, -07, 09, -12 thru -17, -28-36 due to low recovery in the low-spike quality control checks.

VOA Analysis Note:
Acrylonitrile was analyzed on-demand using CLP equivalent methodology. This analyte does not appear in the data tables or the QC summary and all data for this compound is summarized here. Acrylonitrile was not detected in any of the samples above a quantitation limit of 2 ug/L. A four point curve was analyzed (2, 5, 10 and 20 ug/L). The samples were preserved to a pH<2 with HCl. A low level second source blank spike analyzed at a concentration of 2 ug/L had a recovery of 112%. A mid level second source blank spike analyzed at a concentration of 5 ug/L had a recovery of 102%. A duplicate second source blank spike at 5 ug/L had 205% recovery. Due to this high recovery, duplicate blank spikes from the primary source were analyzed. Recoveries for these spikes were 110% and 157%.

2-Chloroethylvinyl ether is not included in the analysis. 2-chloroethylvinyl ether breaks down in acidified samples.

Matrix spike/matrix spike duplicate analysis could not be completed due to insufficient sample volume. A single matrix spike was performed for samples 1201013-14 and 1201013-33.

The acetone result for sample 1201013-36 is qualified with a "K" due to an interference from isopropanol.

TDS/TSS Analyses Note:
TDS results for samples 1201013-13 thru -17, -28, -31 thru -34 are qualified estimated "J" and quantitation limits for samples 1201013-12, -29, -30, -35, -36 are qualified as estimated "UJ" due to problems with negative values for the blank and some of the samples. In addition, there was a high relative percent difference (RPD) obtained for one of the duplicate analyses. QC criteria were met for TSS analysis.

Anions Analysis Note:
The nominal quantitation limit (NQL) was outside acceptance criteria, therefore, the Quantitation Limit is reported at 0.15 mg/L instead of 0.05 mg/L for all samples.

Oil and Grease Analysis Note:
Samples were received in containers not conducive to use on the Horizon SPE-DEX automated system. Therefore, manual extraction technique was used for all samples. Refer to notes in the case file for additional information.

1201015
Metals Analysis Note:
Lead and zinc were detected in the equipment blank. (EB01). Therefore, as required for this project, sample results were qualified "B" when the values for lead and zinc were less than 10X the value reported for the equipment blank.

SVOCs Analysis Note:
Results for sample 1201015-26 are suspect. Although, all QC and lab blanks are acceptable for sample 1201015-26, low levels of certain compounds detected indicate possible glassware contamination.

For this project two additional compounds are added to the SVOC analysis; 2-methoxyethanol and 1-methylnaphthalene. A separate calibration curve is used for these compounds with quality control requirements per the On-Demand protocol. For 2-methoxyethanol, the analysis is also being completed on each sample using the HPLC/MS/MS technique (Glycol analysis). Since SVOC extraction efficiencies are problematic for 2-methoxyethanol, the results from the HPLC/MS/MS technique should be used for these samples. For samples 1201015-11 thru 43 the blank spike (LCS) quality control samples did not include these two compounds. Therefore, all quantitation limits for these samples are qualified estimated "UJ."

For samples 1201015-01 thru -05, quantitation limits for 2,4-dinitrophenol, 2-methoxyethanol, and hexachlorocyclopentadiene are

elevated due to zero percent recovery in the low-spike quality control check (BS1). For samples 1201015-01 thru -05, quantitation limits for 4,6-dinitro-2-methylphenol, 4-nitrophenol, and, 2,3,4,6-tetrachlorophenol are elevated due to low percent recovery in the low-spike quality control check. For all samples, quantitation limits for pentachlorophenol are elevated due to low percent recovery in the low-spike quality control check. Results for all the mid-level spike quality control check (BS2) are within acceptance limits; therefore, quantitation limits are raised to the mid-level value. In the report, only 16 compounds are reported for blank spike quality control check samples. Quality control information about the additional spiked compounds is available in the case file.

Several surrogate recoveries were below acceptance limits for sample 1201015-41 due to an extraction chiller malfunction. Results are below the quantitation limit and are qualified as estimated "J" and may be biased low. Quantitation limits are qualified as estimated "UJ."

Results for a limited number of parameters found in all samples have been qualified "B" because of contamination found in either the method blank, field blank, or equipment blank.

VOA Analysis Note:
A low level second source blank spike analyzed at a concentration of 2 ug/L had a recovery of 98% on 1/31/12 and 98% on 2/8/12. A mid level second source blank spike analyzed at a concentration of 10 ug/L had a recovery of 116% on 1/31/12 and 119% on 2/8/12. A matrix spike and matrix spike duplicate pair was prepared using sample 1201015-17 (Sta. HW35) at a concentration of 5 ppb acrylonitrile with recoveries of 188% and 189 %, RPD=0.

The high matrix spike recovery for acrylonitrile and six compounds eluting in the same region is due to background interference in the sample.

2-Chloroethylvinyl ether is not included in the analysis. 2-Chloroethylvinyl ether breaks down in acidified samples.

In addition to the Tentatively Identified Compounds (TICs) reported, two samples exhibited a large peak that eluted too early in the chromatograph to estimate concentration. The mass spectra profile is consistent with the presence of propane (>93% probability). The samples are 1201015-37 (Sta. HW29z) and 1201015-39 (Sta. HW29).

TDS Analysis Note:
Results for the equipment blank (1201015-01), field blank (1201015-02) and samples 1201015-03-05,11,13,15,17,19,21,25, 26, 31 and 33 are qualified estimated "B" due to contamination of the laboratory method blank, equipment blank and field blank.. Results for sample 1201015-17 are qualified estimated "J" due to a high relative percent deviation of the laboratory duplicate.

Nitrite/Nitrate and Total Nitrogen Analysis Note:
Result for nitrate/nitrite for sample 1201015-17 was qualified estimated 'J' due to the laboratory matrix spike results outside of criteria limits.

Total Phosphorus Analysis Note:
Result for total phosphorus for sample 1201015-18 was qualified estimated 'J' due to the laboratory matrix spike results outside of criteria limits.

Oil and Grease Analysis Note:
The laboratory blank spike result was outside the higher criteria limit. Since all sample results were less than the quantitation limit, there is no impact on the data.

1202001
Metals Analysis Note:
Copper and zinc were detected in field blank (FB08). Lead and Zinc were detected in field blank (FB09). Therefore, as required for this project, sample results were qualified "B" when the values for lead, copper and zinc were less than 10X the value reported for the field blanks.

General Notes:
This report contains results for Volatiles (VOAs), Semivolatiles (SVOAs), and Alcohol analyses only. Sample for location HW39-P is identified by two lab sample numbers (1202001-24 and 1202001-48). Lab Sample 1202001-48 is associated with the Volatile analysis only.

SVOAs Analysis Note:
For this project two additional compounds are added to the SVOC analysis; 2-methoxyethanol and 1-methylnaphthalene. A separate calibration curve is used for these compounds with quality control requirements per the On-Demand protocol. For 2-methoxyethanol, the analysis is also being completed on each sample using the HPLC/MS/MS technique (Glycol analysis). Since SVOC extraction efficiencies are problematic for 2-methoxyethanol, the results from the HPLC/MS/MS technique should be used for these samples.

For all samples quantitation limits for 2-methoxyethanol are elevated due to zero percent recovery in the low-spike quality control check (BS1). For several samples quantitation limits for 2,4-dinitrophenol and 3,3'-dichlorobenzidine are elevated due to zero percent recovery in the low-spike quality control check (BS1). For several samples, quantitation limits for acenaphthene, bis(2-chloroisopropyl) ether, 4-bromophenyl phenyl ether, 4,6-dinitro-2-methylphenol, 2,6-dinitrotoluene, fluorene, pentachlorophenol, phenanthrene, pyrene, 4-chloroaniline, and 3-nitroaniline are elevated due to low percent recovery in the low-spike quality control check (BS1). Results for most of the mid-level spike quality control check (BS2) are within acceptance limits; therefore, quantitation limits are raised to the mid-level

value. Results for the mid-level quality control check for 2-methoxyethanol for several samples are qualified as rejected "R" due to zero percent recovery. In the report, only 16 compounds are reported for blank spike quality control check samples. Quality control information about the additional spiked compounds is available in the case file.

For sample 1202001-17, quantitation limit for hexachloroethane is qualified as estimated "UJ" due to low recovery in the matrix spike quality control check.

Surrogates were double spiked in sample 1202001-05. Recovery criteria were met with no impact on quality of results.

Result for bis-(2-ethylhexyl)phthalate in the laboratory blank (BB20502-BLK) is 1.1 ug/L. Sample results are qualified as possible blank contamination "B" when the value is less than 10x the laboratory blank value. For sample 1202001-23 the bis-(2-ethylhexyl)phthalate result is 5.7 ug/L; which is less than the 10x value but greater than 5x.

Results for a limited number of parameters found in all samples have been qualified "B" because of contamination found in either the method blank, field blank, or equipment blank.

VOA Analysis Note:
A low level second source blank spike analyzed at a concentration of 2 ug/L had a recovery of 140%. A mid level second source blank spike analyzed at a concentration of 5 ug/L had a recovery of 95%. Matrix spike/matrix spike duplicate analysis was performed for samples 1202001-17 and 1202001-23. Matrix spike recoveries for sample 1202001-17 were 105% and 91%. Matrix spike recoveries for sample 1202001-23 were 97% and 103%.

Acetone values greater than 2 ug/L have been qualified with a "J", estimated, since the initial calibration curve was outside of acceptance limits for this compound.

Nitrite/Nitrate and Total Nitrogen Analysis Note:
Result for nitrate/nitrite for sample 1202001-44 was qualified estimated 'J' due to the laboratory matrix spike results outside of criteria limits.

Result for total nitrogen for sample 1202001-13 was qualified estimated 'J' due to the laboratory duplicate results outside of criteria limits.

Oil and Grease Analysis Note:
The quantitation limit for several samples was qualified estimated 'UJ' due to the laboratory minimum reporting limit quality control check outside of criteria limits.

1202003
General Notes:
This report contains results for Metals analyses only. Due to the urgent need for the metals results, results for Glycol analysis will be included in Part 2 of 3 Report. All other parameters identified on the chain-of-custody form are included in separate reports. Lab Sample numbers 1202003-11, -12, -21 thru -23, and 1202003-48 thru -50 are not included in this report since these samples were designated for Volatile Organic analysis only.

Two sample vials for the VOC analysis were received broken for 1202003-20. One sample vial for the Alcohol analysis was received broken for two samples, 1202003-01 and 1202003-20. Analysis was completed on the remaining vials. All samples were received at proper temperature.

Metals Analysis Note:
Results for zinc for samples 1202003-36-38,-40-41,-43 were qualified estimated 'J' due to the laboratory quality control check sample results outside of criteria.

Two sample vials for the VOC analysis were received broken for 1202003-20. One sample vial for the Alcohol analysis was received broken for two samples, 1202003-01 and 1202003-20. Analysis was completed on the remaining vials. All samples were received at proper temperature.

Glycols by HPLC/MS/MS Note:
The blank spike results for two parameters were outside of quality control acceptance limits but there was no impact on the data.

SVOAs Analysis Note:
For this project two additional compounds are added to the SVOC analysis; 2-methoxyethanol and 1-methylnaphthalene. A separate calibration curve is used for these compounds with quality control requirements per the On-Demand protocol. For 2-methoxyethanol, the analysis is also being completed on each sample using the HPLC/MS/MS technique (Glycol analysis). Since SVOC extraction efficiencies are problematic for 2-methoxyethanol, the results from the HPLC/MS/MS technique should be used for these samples. For samples 1202003-13 thru 39 the blank spike (LCS) and matrix spike quality control samples did not include these two compounds. Therefore, all quantitation limits for these samples are qualified estimated "UJ."

For samples 1202003-01 thru -05, quantitation limits and 2-methoxyethanol and 3,3'-dichlorobenzidine are elevated due to zero percent recovery in the low-spike quality control check (BS1). Results for the mid-level spike quality control check (BS2) are within acceptance limits; therefore, quantitation limits are raised to the mid-level value. For samples 1202003-01 thru -05 data for 3,3'-dichlorobenzidine is rejected and qualified "R"due to zero percent recovery in the low- and mid-spike quality control check. For samples 1202003-01 thru -05, quantitation limits for 3-nitroanline are qualified "UJ" due to low percent recovery in the low-spike quality control check. For samples

1202003-01 thru -05, quantitation limits for 4-chloroaniline are elevated due to very low percent recovery in the low-spike quality control check. In the report, only 16 compounds are reported for the blank spike quality control check samples. Quality control information about the additional compounds is available in the case file.

Appropriate volumes were not provided for a matrix spike and a matrix spike duplicate for the second sample set 1202003-13 thru 1202003-39.

Two surrogate recoveries were below acceptance limits for sample 1202003-36. Results are below the quantitation limit and are qualified as estimated "J" and may be biased low. Quantitation limits are qualified as estimated "UJ."

Results for a limited number of parameters found in all samples have been qualified "B" because of contamination found in either the method blank, field blank, or equipment blank.

Three blank spike results for 2,4-Dinitrotoluene are slightly above the high end of the acceptance window. There is no impact on the data.

VOA Analysis Note:
A low level second source blank spike analyzed at a concentration of 2 ug/L had a recovery of 98%. A mid level second source blank spike analyzed at a concentration of 10 ug/L had a recovery of 119%. Matrix spike/matrix spike duplicate analysis was performed for sample 1202003-01 (Sta. HW45). Matrix spike recoveries for acrylonitrile were 100% and 113% at a spike level of 5 ug/L.

A mid level second source blank spike for target compounds was analyzed and five compounds were outside the criteria. These compounds were not detected in the samples and there is no impact to results.

The matrix spike analyses for target compounds had one recovery high, one low, and three measures of reproducibility (RPD) slightly outside criteria. The source sample was non-detect and there is no impact to data.

The B qualifier was applied to acetone and chloroform sample results due to the presence of these compounds in associated field blanks.

Significant levels of isobutane were found in all trip, equipment, and field blanks. Isobutane was not detected in the environmental samples. The source of the field blank contamination should be investigated and corrected.

2-Chloroethylvinyl ether is not included in the analysis. 2-chloroethylvinyl ether breaks down in acidified samples.

TDS Analysis Note:
As required for this project, sample results were qualified "B" when the TDS value was less than 10X the value reported for contaminated blanks. All samples with detectable results were qualified "B" due to the field blank (FB13) contamination.

Oil and Grease Analysis Note:
The quantitation limits for several samples were qualified estimated 'UJ' due to laboratory quality control checks outside of criteria limits.

Total Phosphorus Analyses Note:
As required for this project, sample results were qualified "B" when the TP value was less than 10X the value reported for contaminated blanks. All samples with detectable results were qualified "B" due to the field blank (EB02) contamination.

1202004
NOTE....the VOA narrative was left out of this report (1202004)

The sample vial for the Glycols analysis was received broken for 1202004-22. All samples were received at proper temperature

SVOAs Analysis Note:
Sample 1202004-29 was re-extracted due to a laboratory error. Although re-extraction was successful, results for sample 1202004-29 are suspect. Although, all QC and lab blanks are acceptable for sample 1202004-29, low levels of certain compounds detected indicate possible glassware contamination.

For this project two additional compounds are added to the SVOC analysis; 2-methoxyethanol and 1-methylnaphthalene. A separate calibration curve is used these compounds with quality control requirements per the On-Demand protocol. For 2-methoxyethanol, the analysis is also being completed on each sample using the HPLC/MS/MS technique (Glycol analysis). Since SVOC extraction efficiencies are problematic for 2-methoxyethanol, the results from the HPLC/MS/MS technique should be used for these samples.

Results for samples 1202004-01 thru -28, for 2-methoxyethanol, 3,3'-dichlorobenzidine, and 2,4-dinitrophenol are considered rejected (qualified "R") due to zero percent recovery in the low-spike quality control check and lack of a mid-spike quality control check. Quantitation limits for pentachlorophenol, 4,6-dinitro-2-methylphenol, and 4-chloroaniline are qualified estimated "UJ" due to low percent recovery in the low-spike quality control check. The mid-spike quality control check was broken before it could be analyzed.

The quantitation limits for samples 1202004-30 thru -32 for 3,3'-dichlorobenzidine, pentachlorophenol, 4,6-dinitro-2-methylphenol, 2,4-dinitrophenol, and 2-methoxyethanol are elevated due to zero or low percent recovery in the low-spike quality control check. The mid-spike quality control check was acceptable.

The quantitation limits for sample 1202004-29 for pentachlorophenol and 4,6-dinitro-2-methylphenol are qualified "UJ" due to low percent recovery in the low-spike quality control check. The sample result for atrazine is qualified estimated "J" due to low percent

recovery in the low-spike quality control check. The quantitation limit for 2,4-dinitrophenol is elevated due to zero percent recovery in the low-spike quality control check. The mid-spike quality control results are acceptable. The results for 3,3'-dichlorobenzidine, 3-nitroaniline, 4-chloroaniline , and 2-methoxyethanol are considered rejected (qualified "R") due to zero or low percent recovery in the low and mid-spike quality control checks.

Four out of six surrogates recoveries are below acceptance limits for sample 1202004-08; therefore, quantitation limits are qualified estimated "UJ" for all non-detected analytes. Low internal standard counts were observed in sample 1202004-32; therefore, quantitation limits for n-nitrosodimethylamine, benzaldehyde, phenol, bis(2-chloroethyl)ether, 2-chlorophenol, 2-methylphenol, bis(2-chloroisopropyl)ether, acetophenone, 4-methylphenol, hexachloroethane, n-nitroso-di-n-propylamine, and 1-methylnaphthalene are qualified estimated "UJ".

In the report, only 16 compounds are reported for spike quality control check samples. Quality control information for the remaining compounds is available in the case file.

TDS/TSS Analysis Note:
As required for this project, sample results were qualified "B" when the TDS value was less than 10X the value reported for contaminated blanks. All samples with detectable results were qualified "B" due to the field blank (FB14) contamination

Nitrite/Nitrate and Total Nitrogen Analysis Note:
Result for total nitrogen for sample 1202004-28 was qualified estimated 'J' due to the laboratory matrix spike results outside of criteria limits.

Oil and Grease Analysis Note:
The quantitation limit for all samples was qualified estimated 'UJ' due to the laboratory minimum reporting limit quality control checks, one matrix spike, and one blank spike outside of criteria limits.

Total Phosphorus Analyses Note:
Results for sample 1202004-21 was qualified estimated 'J' due to the laboratory matrix spike results outside of criteria limits.

1202005
General Notes:
One sample vial for the VOC analysis was received broken for 1202005-16. One sample bottle for the Oil & Grease analysis was received broken for 1202005-11. Analysis was completed on the remaining vials and bottles.

One cooler that contained the samples for 1202005-12 (VOAs only), -13, -20, and -26 was received with the temperature blank vial broken. However, the cooler was packed with ice and the sample containers were cool to the touch. All remaining samples were received at proper temperature.

Metals Analysis Note:
The result for arsenic for sample 1202005-08 was qualified estimated 'J' due to the laboratory duplicate quality control check sample result outside of criteria.

The result for manganese for sample 1202005-14 was qualified estimated 'J' due to the laboratory matrix spike quality control check sample result outside of criteria.

The result for nickel for sample 1202005-34 was qualified estimated 'J' due to the laboratory duplicate quality control check sample result outside of criteria.

Copper was detected in the field blank (FB18). Therefore, as required for this project, several sample results were qualified "B" when the values for copper were less than 10X the value reported for the field blank.

The laboratory control sample (BS1) result for tin was outside of the higher criteria limit. Since all sample results were less than the quantitation limit, there is no impact on the data.

SVOAs Analysis Note:
For this project two additional compounds are added to the SVOC analysis; 2-methoxyethanol and 1-methylnaphthalene. A separate calibration curve is used for these compounds with quality control requirements per the On-Demand protocol. For 2-methoxyethanol, the analysis is also being completed on each sample using the HPLC/MS/MS technique (Glycol analysis). Since SVOC extraction efficiencies are problematic for 2-methoxyethanol, the results from the HPLC/MS/MS technique should be used for these samples.

For all samples, quantitation limits for 2,4-dinitrophenol and 2-methoxyethanol are elevated due to zero percent recovery in the low-spike quality control check (BS1). For several samples, quantitation limits for 3,3'-dichlorobenzidine and 4,6-dinitro-2-methylphenol are elevated due to zero percent recovery in the low-spike quality control check. For all samples, quantitation limit for pentachlorophenol is elevated due to low percent recovery in the low-spike quality control check. For several samples, quantitation limits for 4,6-dinitro-2-methylphenol, 3-nitroaniline, 4-chloroaniline, and atrazine are elevated due to low percent recovery in the low-spike quality control check. Results for most of the mid-level spike quality control check (BS2) are within acceptance limits; therefore, quantitation limits are raised to the mid-level value. For several samples, 3,3'-dichlorobenzidine and 2-methoxyethanol are qualified "R" due to zero percent recovery in the mid-level spike quality control check. In the report, only 16 compounds are reported for blank spike quality control check samples. Quality control information about the additional spiked compounds is available in the case file.

For 1202005-10, the matrix spike duplicate exceeded quality control requirements for several analytes; therefore, matrix spike duplicate results are qualified estimated "UJ".

For 1202005-33, internal standard counts are low; therefore, quantitation limits were qualified estimated "UJ".

Results for a limited number of parameters found in all samples are qualified "B" due to contamination found in either the method blank, field blank, or equipment blank.

Blank spike results for several compounds are slightly above the high end of the acceptance window; which has no impact on the data.

VOA Analysis Note:
A low level second source blank spike analyzed at a concentration of 2 ug/L had a recovery of 88%. A mid level second source blank spike analyzed at a concentration of 10 ug/L had a recovery of 112%. Matrix spike/matrix spike duplicate analysis was performed for samples 1202005-10 and 1202005-33. Matrix spike recoveries for sample 1202005-10 were 96% and 126%. Matrix spike recoveries for sample 1202005-33 were 200% and 108%.

Acetone results greater than 2 ug/L are qualified estimated "J" since the initial calibration curve was outside of acceptance limits for this compound.

A mid-level second source blank spike for target compounds was analyzed and two compounds were outside the criteria. These compounds were not detected in the samples and there is no impact to the results.

The matrix spike analyses for target compounds had several recoveries outside criteria. Recoveries were low for two compounds, acetone, and bromomethane. Acetone results are qualified estimated "J" as previously described. Bromomethane was not detected in the samples. Evaluation of additional quality control indicates the loss of bromomethane from the spiking solution; this does not impact the reported quantitation level. Three recoveries were high and six measures of reproducibility (RPD) were outside criteria. The source samples were non-detect for these compounds hence no impact to data quality.

In addition to the Tentatively Identified Compounds (TICs) reported, two samples exhibited a large peak that eluted too early in the chromatograph to estimate concentration. The mass spectra profile is consistent with the presence of propane (93% probability). The samples are 1202005-34 (Sta. HW03) and 1202005-36 (Sta. HW03z).

TDS Analysis Note:
As required for this project, sample results were qualified "B" when the TDS value was less than 10X the value reported for contaminated blanks. All samples with detectable results were qualified "B" due to the field blank (FB16) contamination.

Oil and Grease Analysis Note:
The quantitation limit for all samples was qualified estimated 'UJ' due to the laboratory minimum reporting limit quality control check, one matrix spike, and one blank spike outside of criteria limits.

1203001
Metals Analysis Note:
The quantitation limits for several samples for tin were qualified estimated "UJ" due to a quality control sample outside of acceptance limits.

The quantitation limit for uranium for sample 1203001-12 was qualified estimated "UJ" due to the absence of a second source quality control sample.

Glycols by HPLC/MS/MS Note:
All QC were within criteria. The quantitation limit for DiG was raised to 50ug/L and the quantitation limit for 2-Bu was raised to 25ug/L because of instrument response during initial calibration. On Demand protocols include the analysis of a low level blank spike at the quantitation limit. All low level blank spikes were within the OASQA limits of 60-140% recovery and are as follows: DiG: 66%, TriG: 61%, TeG: 66%, 2-Bu: 75%, 2-Me: 108%.

SVOAs Analysis Note:
Results for sample 1203001-08 are suspect. Although all QC and lab blanks are acceptable for sample 1203001-08, low levels of certain compounds detected indicate possible glassware contamination.

The multiple TICs found in sample 1203001-01 are likely due to extraction of a pH strip that fell in the jar and was not able to be removed.

For this project one additional compound is added to the SVOC analysis; 1-methylnaphthalene. This is a non-routine analysis. All current in-house quality control limits were met.

For all samples, quantitation limits for 2,4-dinitrophenol are qualified estimated "UJ" due to exceeding calibration limits. For most samples, quantitation limits for benzo(k) fluoranthene are qualified estimated "UJ" due to exceeding calibration limits.

For all samples, quantitation limits for 2,4-dinitrophenol are elevated due to zero percent recovery in the low-spike quality control check (BS1) and mid-low-spike quality control check (BS3). Results for the mid-level spike quality control check (BS2) are within acceptance limits; therefore, quantitation limits are raised to the mid-level value. For all samples, quantitation limits for 4,6-dinitro-2-methylphenol

are qualified estimated "UJ" due to low percent recovery in the low-spike quality control check (BS1). In the report, only 21 compounds are reported for blank spike quality control check samples. Quality control information about the additional spiked compounds is available in the case file.

Results for a limited number of compounds found in all samples have been qualified "B" because of contamination found in either the method blank, field blank, or equipment blank.

VOA Analysis Note:
A low level second source blank spike analyzed at a concentration of 2 ug/L had a recovery of 99%. A mid level second source blank spike analyzed at a concentration of 10 ug/L had a recovery of 101%. Matrix spike/matrix spike duplicate analysis was performed for sample 1203001-04. Matrix spike recoveries were 102% and 94%.

Nitrite/Nitrate and Total Nitrogen Analysis Note:
As required for this project, sample results for nitrate/nitrite were qualified "B" when the value was less than 10X the value reported for contaminated blanks. All samples with detectable results were qualified "B" due to field blank (FB21) contamination.

Anions Analysis Note:
As required for this project, sample results were qualified "B" when the values for chloride were less than 10X the value reported for the field blanks. Several samples were qualified "B" due to field blank (FB20) contamination.
All required instrument QC was run and was within the required criteria.

1205011
Metals Analysis Note:
The detectable sample results for uranium were qualified estimated "J" due to a quality control sample outside of acceptance limits.

The quantitation limit for selenium for sample 1205011-10 was qualified estimated "UJ" due to the matrix spike outside of acceptance limits.

SVOAs Analysis Note:
For this project, one additional compound is added to the SVOC analysis; 1-methylnaphthalene. This is a non-routine analysis. All current in-house quality control limits were met.

For all samples, quantitation limits for 2,4-dinitrophenol are rejected "R" due to 0% recovery in the low-spike quality control check (BS1) and less than 10% recovery in the mid-level spike quality control check (BS2). For all samples, 4,6-dinitro-2-methylphenol and pentachlorophenol had less than 10% recovery in the low-spike quality control check (BS1) but within acceptance limits in the mid-level spike quality control check (BS2); therefore, quantitation limits are raised to the mid-level value. In the report, only 21 compounds are reported for blank-spike quality control check samples. Quality control information about the additional spiked compounds is available in the case file. The acceptance limits for 4,6-dinitro-2-methylphenol in the BS1 is 53-100%.

Results for a limited number of compounds found in all samples have been qualified "B" because of contamination found in either the method blank, field blank, or equipment blank.

Glycols by HPLC/MS/MS Note:
According to OASQA On Demand procedures, a blank spike (BS) should be prepared at the NQL. Due to the varying NQLs, several low level blank spikes were analyzed. Low BS results are reported as "MRL check" samples in the report, with QC limits of 60-140%. Based on low BS recovery results, the NQL for 2-butoxyethanol was raised from 5 to 10ppb. MRL results that were qualified "A" were below the reporting limit and, other than raising the NQL of 2-Bu, no impact on data is expected.

VOA Analysis Note:
A low-level second source blank spike analyzed at a concentration of 2 ug/L had a recovery of 101%. A mid-level second source blank spike was analyzed at a concentration of 5 ug/L with a recovery of 109% and at 10 ug/L with a recovery of 100%.

Matrix spike/matrix spike duplicate samples were prepared with sample 1205011-11 but were not analyzed due to instrument failure.

TDS Analysis Note:
Sample result for 1205011-02 was qualified estimated "J" due to duplicate quality control sample outside of acceptance limits.

1205012
Metals Analysis Note:
The detectable sample results for uranium were qualified estimated "J" due to a quality control sample outside of acceptance limits.

The sample results for aluminum, boron, lead, and lithium for sample 1205012-05 were qualified estimated "J" due to a quality control sample outside of acceptance limits.

All samples except 1205012-05 were analyzed by "direct analysis" (without digestion) because the turbidity of the samples was found to be <1 NTU. Sample 1205012-05 had a turbidity of greater than 1 NTU and; therefore, had to be digested. Batch QC for the digested sample is BE23003.

Sample 1205012-11 was an aliquot from the site's "investigation derived wastewater". The Client requested that this sample (which was

not acidified in the field) be filtered through a 0.6-0.8 um glass fiber filter, acidified with nitric acid, and then analyzed as per the rest of the samples. This procedure was followed and sample results reported. Note that the silver result is qualified estimated "J" because the sample was not digested as per method 200.8 requirements. In addition, the silver blank spike was outside of acceptance limits.

1207005
N/A